Salmon, Trout and Steelhead in Water Resource Inventory Area 13: A Strategy for Stock Recovery and Project Prioritization 2001-2002

Prepared by:

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1.0 EXECUTIVE SUMMARY

Intensive statewide salmonid recovery efforts were recently initiated following the listing of several Columbia River and Puget Sound stocks under the Endangered Species Act. Washington State House Bill 2496 directs the Washington Conservation Commission to assemble technical advisory groups (TAGs) of local watershed experts to identify habitat factors limiting salmonid production in each of the major watersheds in the state. The limiting factors assessments (LFAs) conducted under SHB 2496 yield "action" recommendations that could be implemented to help restore salmonid populations. These recommendations are not usually prioritized and are limited in detail, but they may be utilized by local governments, landowners, tribes, and non-profit organizations to identify specific on-the-ground salmon habitat projects that could facilitate salmon recovery. Such projects could be funded by the Salmon Recovery Funding Board (SRFB) or other grant programs. Projects that address salmon habitat issues not identified in the LFAs are also fundable, particularly if they support the overall objectives of salmon recovery for the watershed. The SRFB was created in 1999 by the Washington Legislature to guide the spending of state funds targeted for salmon habitat restoration. Landowners and other non-profit organizations desiring funding for salmon recovery based projects can submit applications for projects funded by the SRFB through the Lead Entity overseeing efforts in the watershed. It is the role of each watershed's Lead Entity to prioritize projects that best represent the statewide goals and guidance for salmon recovery, and the overall strategy for salmon recovery within the watershed.

The purpose of this document is to provide SRFB applicants with the strategy that the Thurston Conservation District (TCD), the Lead Entity for WRIA 13, will utilize to steer salmon recovery in WRIA 13, and prioritize projects that satisfy the objectives of salmon recovery unique to this watershed. It must be recognized that the focus of SRFB projects is on salmonid habitat improvement, even though elements of harvest, hatcheries, and hydropower have played an equal if not greater role in the decline of salmonids in many watersheds of the state. This document therefore focuses on the habitat components of a salmon recovery strategy required for salmon stock improvement, and does not *directly* address the other elements that can affect salmon recovery overall.

The overall strategy for salmon recovery in WRIA 13 emphasizes the enrichment of native and wild stock reproduction to achieve attainable (not necessarily historic) levels of production. In WRIA 13 it is especially important to recognize the distinction between "native" and "wild" stocks when reviewing the project prioritization methods outlined in this document; both stock types reproduce naturally, but the genetics of wild stocks are considered principally hatchery derived. Current salmon spawning and rearing in the largest watershed in WRIA 13, the Deschutes River, is the product of past non-native introductions, as Tumwater Falls historically restricted natural use of the system. Today, the

Deschutes River chinook originate from the Deschutes hatchery, a strain genetically indistinct from the fall chinook produced at the Skagit River hatchery (WDFW & WWTIT 1994). Native chinook stocks are extirpated from WRIA 13. Similarly, the threatened coastal bull trout Distinct Population Segment (DPS) has not been found to utilize the habitats found within WRIA 13 (WCC 1999). Nonetheless, native and mixed stocks of coho, chum, steelhead and coastal cutthroat trout persist in WRIA 13, and these stocks have declined significantly over the past 15 years like the native chinook salmon and bull trout stocks elsewhere in Puget Sound. Protection and restoration of the habitat upon which these native and wild stocks depend is therefore the primary focus of the salmon recovery for WRIA 13.

The overall salmon recovery strategy and project prioritization methods detailed in this document represent, in brief: (1) our current understanding of the habitat factors limiting salmonid production within WRIA 13, (2) the underlying causes of these conditions, and (3) the projected response of the salmon stocks of interest to proposed restoration projects. In providing this strategy, it is hoped that applicants will be guided in their project applications to maximize the potential for effective salmon recovery. Projects submitted to the WRIA 13 Lead Entity (Thurston Conservation District) and SRFB will be evaluated based on how they satisfy the objectives of the overall salmon recovery strategy. For more information regarding strategy development, Lead Entity activities and SRFB applications, call Thurston Conservation District or go to www.thurstoncd.com. Applications for project funding can be obtained on line at: www.wa.gov/iac/downloads/manual%2018.pdf

The TCD Lead Entity will oversee a Technical Advisory Committee of technical and citizen representation (TAC) to ensure that sound scientific principles and a high level of data quality support this effort.

2.0 MISSION, GOALS AND OBJECTIVES FOR WRIA 13

MISSION STATEMENT

To identify, propose and support projects, programs and land management actions that yield tangible, sustainable and measurable benefits to salmonids in WRIA 13, with particular emphasis on native and/or wild stocks.

GOALS OF SALMON RECOVERY IN WRIA 13

- To develop a credible, science-based process for identifying and implementing salmon habitat recovery projects that benefit native and wild stocks
- To increase escapement of native and wild stocks to WRIA 13 waters
- To increase community involvement and ownership of salmon recovery efforts in WRIA 13

OBJECTIVES OF THIS SALMON RECOVERY STRATEGY FOR WRIA 13

- Identify and prioritize projects that support the salmon recovery strategy of WRIA 13, and encourage project sponsors to apply for SRFB and other grant funds
- To rehabilitate habitat factors that may limit salmonid production in WR1A 13 waters
- To preserve functioning habitat important for salmonid production in WRIA 13 waters
- To address data gaps of importance that link to understanding salmonid production and recovery in WRIA 13 waters
- To develop an outreach program to involve the public in salmon recovery efforts in WRIA 13
- Review and update the salmon recovery strategy on an annual basis to identify adaptive management needs
- To serve as building block to be incorporated into a broader reaching overall salmon recovery plan for WRIA 13 and adjacent south sound water resource inventory areas.

3.0 APPLICATION REQUIREMENTS

GENERAL REQUIREMENTS FOR PROJECT ELIGIBILITY

Projects to be prioritized for funding through the strategy discussed in this document must lie within the boundaries of WRIA 13 (Figure 1). Waters included within this boundary include:

- Deschutes River watershed (and its tributaries)
- Eld Inlet (and its independent tributaries)
- Henderson Inlet (and its independent tributaries)
- Budd Inlet and its independent tributaries
- Near shore habitats of Henderson, Budd & Eld Inlets, the Nisqually Reach, and Dana Passage

The detailed methods for prioritizing specific projects that meet the objectives of the overall recovery strategy for WRIA 13 are described in the associated document Project Scoring Methodology.

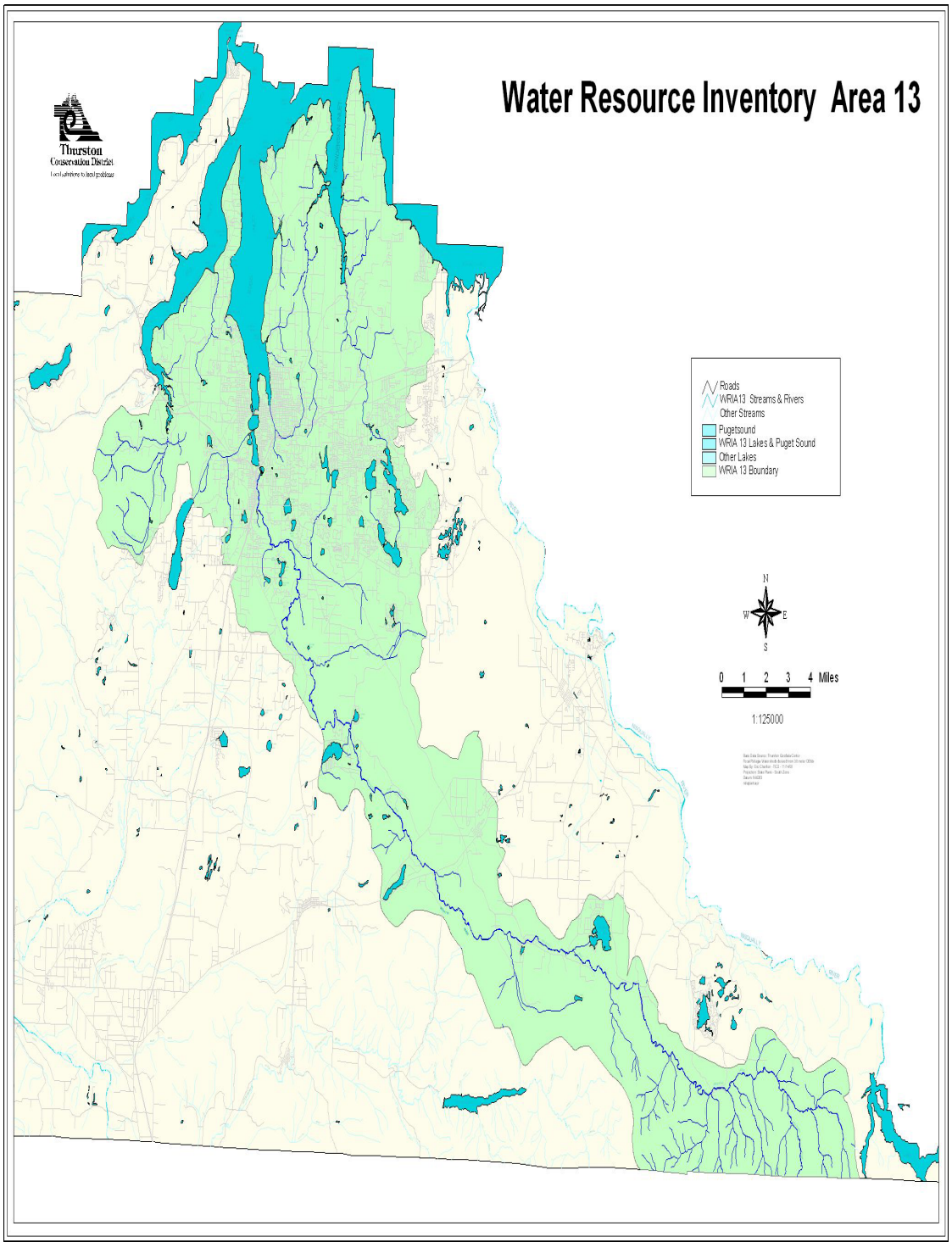

FIGURE 1. WATER RESOURCE INVENTORY AREA 13 (NOT TO SCALE)

PROJECT CATEGORIES IDENTIFIED FOR FUNDING BY SRFB

Specific project categories for funding have been established by the SRFB (JNRC 2001). Potentially funded projects should be categorized under the general headings of: (1) protection, (2) restoration, or (3) assessment. Non-prioritized projects within these categories relevant to WRIA 13 could include:

I. PROTECTION

Examples:

- acquisition by fee of valuable habitat
- securing or trading of water rights to protect instream flows
- easements that prevent future development of important habitats
- education-based programs that provide some certainty of future protection

II. RESTORATION (PROJECTS GENERALLY ADDRESS SPECIFIC LIMITING FACTORS)

1. Instream Diversion

Examples:

- fish screens
- fish bypass structures

2. Instream Passage

Examples:

- bridge retrofit
- culvert removal/replacement
- dam removal
- diversion dam replacement
- fishway retrofit, install, or log wier installation

3. Instream Habitat

Examples:

- bank stabilization

- carcass placement
- channel complexity and off-channel habitat
- channel reconfiguration
- complex log jam
- dike removal/setback
- mass wasting
- roughened channel
- spawning gravel placement
- wetland restoration

4. Riparian Habitat

Examples:

- livestock fencing/crossing
- riparian vegetation planting
- plant thinning, removal, and control

5. Upland Habitat

Examples:

- road abandonment/decommissioning
- road erosion control
- stormwater attenuation/treatment

III. ASSESSMENT (FILLING DATA GAPS)

Examples:

- Developing monitoring strategy for examining physical habitat in streams and stream reaches where such studies have not been conducted

The projects identified above by established SRFB funding categories simply represent examples. The evaluation of projects proposed in the above categories will be dependent on the numeric evaluation of the project relative to the other projects proposed. Projects designated outside of geographic priority areas will not necessarily receive lower scores through the evaluation, as an array of features are considered in the scoring.

ELIGIBILITY

Projects to be funded by the SRFB can be proposed by any non-for-profit organization or individual. Typical sponsors could include:

- Cities
- Counties
- Tribes
- Regional Fisheries Enhancement Groups
- Conservation Districts
- Special Purpose Districts
- Private Landowners

4.0 REVIEW OF HABITAT& STOCK CONDITIONS IN WRIA 13

In order to present projects to the SRFB with good biological foundations, some understanding of the habitat and stock conditions should be represented in applications. This section summarizes information principally contained in the studies listed below. Subsequent revisions of this document will characterize other documentation of habitat conditions from ongoing studies as relevant. Reviewers of this document are encouraged to provide the TCD Lead Entity with information regarding results from other studies that are not considered in this text.

4.1 OVERVIEW OF SALMON HABITAT NEEDS

Although the numeric habitat thresholds necessary for productive salmon habitat continue to be debated, there is broad consensus that salmon require:

- cool, clean, well-oxygenated water,
- in-stream flows that mimic the natural hydrology of the watershed, maintaining adequate flows during low flow periods and minimizing the frequency and magnitude of peak flows (stormwater),
- clean spawning gravels not clogged with fine sediment or toxic materials,
- presence of in-stream pools that will support juvenile rearing and resting areas for returning adults,
- abundance of in-stream large woody debris, particularly large key pieces, that provide cover, create pools, and provide habitat diversity,
- unobstructed migration for juveniles and adults to and from their stream of origin
- broad, dense riparian stands of mature conifer that provides cover, shade, LWD recruitment, etc., and
- estuarine conditions that support production of prey organisms for juvenile outmigrants as well as for rearing and returning adults.

4.2 WATERSHED CONDITION SUMMARIES IN WRIA 13

With respect to the needs of salmon outlined above, studies have been undertaken in WRIA 13 to evaluate habitat. These include:

1. Limiting Factors Analysis (WSCC 1999)

2. Percival Creek Habitat Assessment (TCD, 2000)
3. McLane Creek Habitat Assessment (TCD, 2000)
4. Spurgeon Creek Fish Passage barrier assessment (TCD, 2000)
5. Private Lands Culvert Assessment (TCD, 1999)
6. WRIA 13 Refugia Study (TCD, 1999)
7. Thurston County Water Resources Monitoring Reports

4.2.1 LIMITING FACTORS ANALYSIS

Salmon Habitat Limiting Factors Analysis (LFA) was conducted in WRIA 13 to identify those factors limiting salmonid production in WRIA 13 (WCC 1999). The information contained in the LFA was based on the collective conclusions of a Technical Advisory Group (TAG) familiar with the local watershed and literature, but was not always supported with data from site-specific studies. The LFA for WRIA 13 summarized the existing information on WRIA 13 at the time of the report.

The gross habitat issues identified in the LFA for WRIA 13 can be summarized as follows:

- natural stream ecological processes have been significantly altered due to adjacent land management practices and direct actions within the stream corridor,
- fine sediment (<.85 mm) levels in the stream gravels regularly exceed the <12% level identified as representing suitable spawning habitat,
- there is a lack of adequate large woody debris in streams, particularly larger key pieces that are critical to developing pools, log jams, and other habitat components important to salmonids,
- there is a lack of adequate pool frequency of large, deep pools that are important to rearing juvenile salmonids and adult salmonids on their upstream migration
- naturally high rates of channel instability in this geologically young basin has been further exacerbated by streambank erosion and substrate instability due to loss of streambank and riparian integrity, and alteration of natural hydrology,

- riparian function has been compromised by the removal/alteration of natural riparian vegetation, which affects water quality, lateral erosion, streambank stability, instream habitat conditions, etc.,

- the presence of a significant number of culverts/screens/dams/etc. preclude the unrestricted upstream and downstream access to habitat by juvenile and adult salmonids,

- significant alterations to natural stream hydrology has occurred in streams where the uplands have been heavily developed, and the threat of similar impacts to streams that are experiencing current and future development growth is pervasive, and

- estuarine/marine function is significantly impacted by physical alteration of the natural estuary, by poor water quality in the estuary, and by significant alteration of nearshore ecological function due to shoreline armoring.

4.2.2 Additional Habitat Studies

Physical habitat assessment data in WRIA 13 is available about the mainstem Deschutes River (mouth to RM 41), Percival Creek, Black Lake Ditch, Schneider Creek, McLane Creek, Perkins, Beatty Creek, Swift creek, and limited information for Woodland Creek and Green Cove Creek.

Ambient water quality data has been collected for several years for nearly every stream in WRIA 13 with salmonid presence by Thurston County. In general, data was collected 6 times per year (4 times in the wet season and twice in the dry season) for parameters including nutrients, temperature, dissolved oxygen, turbidity, specific conductivity, and flow. Years of ambient data collection on WRIA 13 are indicated on Table 1.

Table 1: Water Quality Data Collection History

Watershed	Years of Water Quality Data Collection
Budd Inlet Basin	
Deschutes River	21
Chambers creek	9
Spurgeon Creek	7
Reichel Creek	4
Huckleberry Creek	4
Thurston Creek	4
Percival Creek	9

Schneider Creek	5
Ellis Creek	5
Mission Creek	5
Indian Creek	5
Eld	
Green Cover Creek	17
McLane Creek	17
Henderson	
Woodland Creek	17
Woodard Creek	17
Dobbs Creek	15
Sleepy Creek	15

Macro invertebrate sampling has been conducted for the major streams in WRIA 13 in recent years.

The Weyerhaeuser Company, Squaxin Island tribe, Dept of Ecology and Thurston County have conducted a number of specific studies on WRIA 13 water bodies. Continuous season-long temperature monitoring on the mainstem Deschutes was one of those studies. Based on water quality data collected, several water bodies in the WRIA are included on the Clean Water Act 303(d) list of impaired water bodies. Water bodies which are on the impaired list for parameters which are of particular concern to salmonids (dissolved oxygen, instream flow, heavy metals) include the Deschutes River, Ayer Creek, Huckleberry creek, Woodland Creek, Woodard creek, Sleepy Creek and portions of Henderson and Budd Inlets (Thurston County Dept of Water and Waste Management, 2001).

The ability to determine what factors are limiting salmonid production, and to prioritize those impacts within and between the drainages of WRIA 13, is somewhat limited by the current lack of sufficient specific habitat assessment data. Further, in those cases where limiting factors have been identified, the *most limiting* factor to salmonid production in the basin, by species, has not been generally established.

4.3 GAPS IN HABITAT ASSESSMENT DATA FOR WRIA 13

One of the objectives of the LFA is to identify the data gaps within the WRIA. The following data gaps were broadly identified by category as detailed. This summary will likely change in future versions of this document, as additional information becomes available. Notwithstanding, data gaps can be a focus of assessment-focused projects that could be proposed for SRFB funding, and are therefore relevant to this strategy document.

4.3.1 FISH PASSAGE

One of the most direct and cost-effective methods to increase salmon habitat is to eliminate the passage barriers that restrict the use of potentially usable habitat. Evaluations to determine the uppermost extent of juvenile salmon rearing have not been done for most streams in WRIA 13. The known limits of fish distribution, as determined by culvert conditions or naturally, are summarized in TABLE 1.

A comprehensive inventory of culverts on State highways and County roads has been completed for WRIA 13 (WDFW 1997). Some privately owned culverts upstream of identified fish passage barriers on State and County roads have also been inventoried. In 2000, the Thurston Conservation District (TCD) completed an assessment of culverts in Spurgeon Creek on privately owned lands. TCD also conducted a habitat assessment of McLane sub basin that also evaluated fish passage barriers (TCD 2000). Aside from these projects, no comprehensive inventory of culverts on private property has been completed. Property ownership ranges from small parcels to large corporate forest or agricultural ownerships. Although many of the privately owned culverts may be in the upper headwaters of streams, they may impair or preclude access to significant rearing habitat. It is therefore recommended that the existing inventory be expanded to include an assessment of culverts on private lands. (The uppermost limit of salmon and steelhead species in WRIA 13, as detailed in the Limiting Factors Analysis (WCC 1999) is detailed in Table 2, of this document).

4.3.2 FLOODPLAINS

Habitat monitoring data on floodplain connectivity, presence of LWD, presence of pools, bank stability, and off-channel habitat have been collected on the mainstem Deschutes River, Percival Creek and Black Lake Ditch, Green Cove Creek, Schneider, McLane, Perkins and Swift Creeks. The TCD conducted a refugia study for WRIA 13 that identified priority refugia habitat in the McLane sub basin, Fox Creek, and several sites on the Deschutes mainstem (TCD, 2000). The WRIA 13 LFA recommended that a comprehensive habitat monitoring strategy be developed for WRIA 13, with particular attention to those streams for which information is not currently available. The strategy, as proposed, could be based on representative sub-sample reaches or on a comprehensive evaluation of entire drainages.

4.3.3 SUBSTRATE

The primary concern in WRIA 13 waters regarding substrate is the stability of the substrate and the level of fine sediment (<0.85 mm) embeddedness in spawning gravels. Data on fine sediment embeddedness is currently limited to specific reaches in the mainstem Deschutes, McLane, and Swift creeks. Data on substrate stability (e.g., scouring) has not been collected and was considered a significant data gap in the LFA. The LFA recommended that a comprehensive habitat-monitoring program be developed for WRIA 13, with particular attention to those streams for which information is not currently available. The program could be based on representative sub-sample reaches or a comprehensive evaluation of entire drainages. Such monitoring, in addition to providing information on embeddedness, could provide system-wide information on the natural availability and stability of spawning gravels (e.g., gravel size, patch diameter, scour frequency) in each system.

4.3.4 RIPARIAN HABITAT

The lack of functional riparian zones was identified as a concern for most streams in WRIA 13. However, little specific information was available to determine the extent of impact associated with riparian condition. The types of vegetation in the riparian area on both the right and left banks of the mainstem Deschutes River are identified, but the width of the riparian buffer is only available for approximately half of the sample reaches, and age/size of vegetation is also not indicated. Some additional qualitative riparian information is available for other streams, although some of the data are dated. It is recommended that a comprehensive assessment of riparian condition be conducted for WRIA 13. The most effective means to accomplish this assessment in a timely manner may be to use available remote sensing data. This data could then help guide riparian restoration strategies. The assessment should be repeated on a periodic basis (every 5-10 years) to update condition and trends.

4.3.5 WATER QUALITY

Dissolved oxygen, instream flow, and heavy metals levels are some of the currently recognized problems on WRIA 13 streams. There are also indications that fecal coliform warrants further attention in WRIA 13. While there is no direct linkage between fecal coliform and salmonid survival, the data can be used as an indicator of other problems in the watershed (animal access, septic failures, bank instability, high nutrient loads, etc.). Streams/reaches with high fecal coliform counts should be assessed for associated physical habitat conditions that may limit salmonid productivity.

The LFA for WRIA 13 recommended that a comprehensive water quality monitoring program be developed to identify:

- those streams or reaches where summer temperature may be limiting salmonid productivity or affecting upstream migration timing,
- those streams or reaches where dissolved oxygen may be affecting survival or migration,
- the effects of toxics in the estuary on juvenile salmon survival.

This monitoring data will assist in identifying those streams where restoration and protection activities should be prioritized, and would also serve as a comparative baseline to monitor improvement over time as watershed restoration occurs.

Effects of stormwater runoff may be both acute and/or chronic, although the episodic nature of stormwater generally precludes direct chronic impacts. Most stormwater runoff monitoring has been associated with runoff magnitude. In addition, the LFA recommended the monitoring of effects from acute stormwater events. This monitoring is particularly important for early fall freshets that are sufficient to result in overland runoff and outflow from stormwater detention facilities, where runoff from roads or parking lots can contribute high concentrations of gas and oils.

4.3.6 WATER QUANTITY/HYDROLOGY

One of the key limiting factors for many of the streams in the urbanizing portions of WRIA 13 is the alteration of the natural hydrologic regime. Alteration of hydrologic regime is directly related to the amount of effective impervious surface in an area, particularly where the effective impervious surface area exceeds10 percent (Booth and Jackson 1997; WDFW Wild Salmonid Policy). The LFA recommended that the current watershed plans be reevaluated to ensure that stormwater recommendations are implemented in a manner that provides the necessary protection for salmonid habitat from the effects of impervious surfaces on basin hydrology. A comprehensive strategy should be developed for each sub-basin in the WRIA, that limits the increase in impervious surface area and

develops appropriate stormwater engineering to buffer the impacts of existing and proposed impervious surfaces on basin hydrology. Some retrofitting of existing facilities may be required.

4.4 STOCK STATUS REVIEW

TABLE 2 summarizes the status and distribution of salmonid stocks in WRIA 13 sub-basins, as known. This information provides context to applicants seeking SRFB funding for projects designed to benefit certain species or stocks in WRIA 13. Additional stock information, principally derived from the Salmon and Steelhead Stock Inventory (SASSI), is detailed by species (WDFW & WWTIT 1994).

TABLE 2. ANADROMOUS SALMONID DISTRIBUTION AND DIVERSITY IN WRIA 13

Stream Name	WRIA	Inlet (east to west)	Known Salmonid Species In Stream* (Uppermost Dist. [RM])
Dobbs Creek	13.0005	Henderson	Coho (1.50), chum (1.50)
Woodland Creek	13.0006	Henderson	Chinook (3.10), coho (5.10), chum (5.00), cutthroat, steelhead (5.10), sockeye (4.40)
Jorgenson Cr.	13.0008		Coho (0.40)
Fox Creek	13.0009		Chum (0.30), Coho (0.4)
Eagle Creek	13.0010		Coho (1.10)
Woodard Creek	13.0012	Henderson	Coho (7.00), chum (3.60), cutthroat, steelhead (7.00)
Sleepy Creek	13.0015	Henderson	Coho (1.00)
Adams Creek	13.0018	Budd	Coho (1.40), chum (0.30), cutthroat (1.50)
Unnamed	13.0021		Coho (0.30), chum (0.30), cutthroat (0.30)
Ellis	13.0022	Budd	Coho (0.40), chum potential (0.40)
Mission	13.0025	Budd	Coho (0.40), chum (0.40)
Indian Creek	13.0026	Budd	Chinook (1.10), coho (1.20), chum (unknown), cutthroat, steelhead
Moxlie Creek	13.0027	Budd	Chinook (1.10), coho (1.10), chum (1.10), cutthroat, steelhead
Percival Creek	13.0029	Budd	Chinook (3.30), coho (3.30), chum (1.50), cutthroat (3.30), steelhead
Black Lake Ditch	13.0030		Chinook (2.20), coho (2.20), chum (2.20), cutthroat, steelhead, sockeye (0.50)
Deschutes River	13.0028	Budd	Chinook (41.00), coho (41.00), cutthroat (41.00), steelhead (41.00)
Unnamed	13.0032		Coho (0.50)
Chambers Creek	13.0033		Coho (3.75), cutthroat (3.75)
Unnamed	13.0034		Coho (0.50), cutthroat (0.50)
Unnamed	13.0036		Chinook (1.00)
Spurgeon Creek	13.0037		Chinook (1.00), coho (5.20)
Offut Lake Outlet	13.0040		Coho (0.25), steelhead (0.25)
Silver Springs	13.0041		Coho (1.00), steelhead (1.00)
Unnamed	13.0042		Coho (0.60), steelhead (2.00)
Unnamed	13.0045		Coho (1.60)
Reichel Creek	13.0046		Coho (2.80), steelhead (4.50)
Unnamed	13.0047		Coho (1.10)
Pipeline Creek	13.005		Coho (1.50)

	1		
Unnamed	13.0052		Coho (1.00)
Hull Creek	13.0053		Coho (1.80)
Fall Creek	13.0057		Chinook, coho (0.25), chum, cutthroat (0.25), steelhead (0.25)
Unnamed	13.0066		Coho (0.25)
Mitchell Creek	13.0069		Chinook (0.90), coho (1.30), chum, cutthroat (4.00), steelhead (4.00)
Huckleberry Creek	13.0086		Coho (1.20), chum, cutthroat (1.10), steelhead, chinook (0.40)
Johnson Creek	13.0089		Coho (0.70), steelhead (2.60)
Thurston Creek	13.0095		Chinook (2.30), coho (5.00), steelhead (unknown)
Unnamed	13.0097		Coho (1.00)
Unnamed	13.0102		Chinook (2.00), coho (0.40)
Schneider Creek	13.0131	Budd	Coho (0.25), cutthroat (0.25)
Green Cove Creek	13.0133	Eld	Coho (3.40), chum (1.80), cutthroat, steelhead (3.40)
Unnamed	13.0135	Eld	Coho (0.70), chum (0.10)
Houston Creek	13.0137	Eld	Coho (0.20), chum (0.00)
McLane Creek	13.0138	Eld	Chinook (0.90), chum (1.90), coho (5.80), cutthroat (5.80), steelhead (0.6)
Swift Creek	13.0139		Chinook (1.20), coho (1.20), chum (1.20), cutthroat (1.20)
Perkins Creek	13.0140		Coho (0.9), chum (0.9), cutthroat (1.10), steelhead (0.30)
Cedar Flats Creek	13.0141		Coho (2.20), chum (2.20), cutthroat (2.20)
Unnamed	13.0142		Coho (0.75), cutthroat (0.75)
Beatty Creek	13.0143		Coho (2.30), cutthroat (2.30)
*Distribution of native sea-run cutthroat trout is estimated from uppermost distribution of other anadromous salmonids; resident native cutthroat exist above many anadromous barriers.			

4.4.1 CHINOOK

The 1992 Salmon and Steelhead Stock Inventory (SASSI) lists the South Sound Summer/Fall chinook stock status as “healthy” (WDFW & WWTIT 1994). Escapement from 1984 to 1991 averaged 19,700 fish (range 9,600 to 37,000). The stock origin is considered mixed based on a long history of egg transfers, although the genetics of the stock are most similar to the Skagit River hatchery fall chinook. No data were available in SASSI to differentiate escapement of hatchery-produced versus naturally produced wild fish. Nor does the SASSI report distinguish escapement numbers by sub watershed in the South Sound. Thus, systems outside the boundaries of WRIA 13 (e.g., McAllister Creek, Grovers Creek) are included in the overall stock assessment.

Although production is currently dominated by hatchery releases, natural production of wild (hatchery origin) chinook has occurred for some time in the Deschutes River, as hatchery surplus are released upstream. In 1998, for example, 1,746 chinook were released upstream of the Deschutes hatchery and permitted to spawn naturally. Recent beach seine efforts in Budd Inlet, conducted for sediment contamination investigations, have captured unclipped chinook juveniles that are presumably offspring of these hatchery surplus releases.

Besides the Deschutes River, where the principal chinook production occurs in WRIA 13, recent documentation indicates that chinook have been observed in Green Cove Creek (anecdotal evidence only), Percival, and Indian/Moxlie Creek. The regular use of Green Cove Creek by chinook salmon is unlikely given the naturally inadequate flows and conditions for this species in this basin. Reports of annual chinook use of Woodland creek and McLane Creek also support the use of these WRIA 13 systems by this species (WCC 1999); whether these fish are hatchery strays from the Deschutes River, or the product of past natural reproduction of stray hatchery origin fish has not been determined. The extent to which chinook in Woodland, Percival, and McLane creek watersheds are self-sustaining wild populations is not known, but the flows and geomorphology of these basins would naturally limit the use of these systems by this species.

There is an ongoing multi-year study on the Deschutes River looking at production of Chinook from releases of hatchery adults. The study plans to determine the number of eggs deposited and offspring produced from hatchery origin chinook naturally spawning in the Deschutes, and the subsequent productivity of their offspring (Fuss, 2001). Year 1 has been completed. Successful passage and enumeration of all adult fall Chinook was accomplished. Spawning ground counts were done and juvenile outmigrants captured. Smolts were coded wire tagged. Needs for additional research have already been identified.

4.4.2 COHO SALMON

Coho salmon should be considered to utilize all suitable and accessible habitats in WRIA 13 for rearing. Spawning has been identified specifically in the Deschutes River and its tributaries, and in Dobbs, Woodland, Fox, Jorgensen, Woodard, Adams/Unnamed tributary, Ellis, Mission, Indian Moxlie, Percival, Black Lake Ditch, Schneider, Green Cove, Sunset, Houston, McLane, Swift, Perkins, Cedar Flats, and Unnamed creeks (WCC 1999). Two “stocks” are considered by SASSI, a “Deschutes River” stock, and a “Deep South Sound” stock that includes all other tributaries in the WRIA. The Deschutes stock was introduced and is sustained by wild production, while the Deep South Sound stock is considered a mixture of native and hatchery origin with composite production. There are no distinguishable genetic or run-timing characteristics

that provide support for further differentiating the coho populations in WRIA 13 as distinct “stocks” (WDFW & WWTIT 1994).

The Deschutes River coho stock originated from Minter Creek and Green River hatchery stocks. Escapement of Deschutes coho ranged from 500 to 10,400 between 1967 and 1991. Its escapement goal of 8,100 has not been met since 1988, and the stock status has been downgraded from “healthy” to “depressed” by the WDFW. Stock production in the Deschutes is predominantly wild, with hatchery origin coho generally comprising less than 3% of the total escapement. In the past three years, there has been a progressive and substantial decline of the stock (WCC 1999, Squaxin Island Tribe 1999). This decline has been attributed to a combination of low early life stage and marine survival.

Minter Creek hatchery outplants of coho are conducted annually in several of the WRIA 13 tributaries of the Deep South Sound coho stock. The escapement goal for the Deep South Sound stock was achieved only 5 of 27 years between 1967 and 1991. While SASSI (WDFW & WWTIT 1994) listed the stock status as “healthy”, its status is under review by the WDFW and Squaxin Island fisheries managers, and is likely to be downgraded.

4.4.3 CHUM SALMON

In WRIA 13 the WDFW recognizes two distinct stocks, based on geographic separation and run timing. All of the stocks are considered part of the South Sound fall spawning group (WDFW & WWTIT 1994). Electrophoretic and geographic evidence indicates the Eld Inlet and Henderson inlet stocks to be distinct populations. In addition, chum are known to spawn in tributaries to Budd Inlet, which are not included with either of the identified stocks.

Eld Inlet stock has produced an escapement of 4,300 to 37,400 chum from 1968 to 1991. McLane Creek and its tributaries - principally Swift creek, primarily support production.

Additional chum spawning contributing to the Eld Inlet production occurs in Green Cove, Sunset, Houston, Perkins, and Cedar Flats creeks. Although hatchery plants in McLane creek were made from Hood Canal chum between 1976 to 1983, the Eld stock is considered “native” and the stock status is “healthy”.

Henderson Inlet chum salmon are isolated geographically from other WRIA 13 chum stocks and are therefore considered distinct, although this has not been clarified genetically. Spawning of Henderson Inlet stock occurs in Woodland and Woodard Creeks, with smaller numbers occurring in Mill, Dobbs, and Fox creeks. Because of hatchery supplementation from Elson and Minter creek, the stock genetics and current production are considered mixed. Some native production likely still persists in Woodard Creek (WDFW and WWTIT 1994). Because data

on run size and escapement are not available, the stock status of Henderson Inlet chum is considered, “unknown”.

As indicated in the LFA, “additional fall chum spawning has been documented in tributaries to Budd Inlet [within WRIA 13], including Adams/Unnamed tributary, Ellis, Mission, Indian, Moxlie, Percival, and Black Lake Ditch creeks” (WCC 1999). The SASSI does not recognize these stocks specifically, and they would be considered part of the South Sound fall chum group. Lack of recognition does not indicate that their production is not without significance, however.

4.4.4 STEELHEAD

Two winter steelhead stocks are identified within the waters of WRIA 13, the Deschutes, and Eld Inlet stocks. No summer-run stocks are known to utilize WRIA 13 waters for spawning, although rearing cannot be precluded absolutely. The winter run stocks have been differentiated principally based on geographic isolation of spawning populations (WDFW & WWTIT 1994). Deschutes winter steelhead were introduced from Chambers Creek near Steilacoom, following the completion of fish passage facilities over Tumwater Falls. Steelhead harvest is minimal in the basin, with a high of 81 in 1987. The SASSI considers the stock healthy.

Eld Inlet steelhead are considered a native stock, with spawning occurring only in McLane Creek. The stock status is unknown and sport harvest data are not available. General run conditions of all native steelhead in South Sound has been poor over the past few years.

4.4.5 CUTTHROAT

Little is known about the stock status of cutthroat trout. Cutthroat trout in WRIA 13’s anadromous waters are considered essentially native. Hatchery-origin cutthroat were released in the Deschutes River and McAllister Creek for several years. Interbreeding between hatchery and wild cutthroat is thought to have been unlikely because of high catch rates on hatchery fish and poor survival of hatchery-origin fish in the wild. The overall production potential is high for this species in WRIA 13.

5.0 SALMON RECOVERY STRATEGY AND PRIORITAZATION METHODS

5.1. CONCEPTUAL STRATEGY FOR SALMON RECOVERY IN WRIA 13

Guidance provided by the Governors Salmon Recovery Board (SRFB 2001; JNRC 2001), suggests that projects selected for funding by the SRFB should lie within those sub watersheds or reaches that are most in need of protection on the basis of:

(1) their existing ability to support salmon (i.e., salmon strongholds)

(2) their importance to the preservation and conservation of native stocks (i.e., recognized ESU's or DPS's)

(3) their potential to yield measurable increases in native salmonid use after implementation.

STRATEGY ELEMENTS

The 5 elements of the Strategy are factored into the initial project scoring (see "WRIA 13 Scoring and Ranking Procedure 2001-2002) through the application of a scoring formula as well as committee discussion and review. The formula is a combination of scoring responses to a series of questions about biological functionality, and weighting factors as multipliers.

In this manner, the overall salmon recovery strategy is reflected in the projects for which SRFB funds will be solicited.

5.1.2 SUB-WATERSHED PRIORITIZATION WITHIN THE WRIA

Three geographic "groupings" will be recognized for the WRIA 13 salmon recovery strategy. These geographic groupings consider both sub-watersheds and near-shore "habitat units" (HU's) as potential areas for habitat protection and rehabilitation, consistent with the habitats available in WRIA 13 (see section 3.1). The following discussion provides the rationale for how sub-watersheds/near-shore habitats will be geographically prioritized in recognition of their overall role in satisfying the objectives of the salmon recovery strategy for WRIA 13.

- *GROUP A SUB-WATERSHED/NEAR-SHORE HABITAT UNITS*

  These sub-watersheds and/or near-shore habitats each exhibit one or more of the following characteristics:

  - They resemble natural, fully functional aquatic ecosystems. Connectivity among sub-watershed reaches/near-shore HU's is

generally good. These sub-watersheds/near-shore HU's support important native and/or wild (i.e., naturally reproducing) salmonid populations.

- The overall productivity potential and importance for overall stock survival is high for these areas.
- These areas are salmon strongholds for one or more native *or* wild salmonid populations within the WRIA.
- These areas support a limited native (not wild) stock that provides for a reservoir of genetic heterozygosity (diversity) in the WRIA in the event of a catastrophic occurrence in a salmon stronghold sub-watershed (i.e., regardless of the sub-watersheds contribution to total stock abundance/production in the WRIA).
- Habitat complexity and flow regimes in these watersheds are sufficient and diverse to support multiple salmonid species.

All near-shore habitat is included in Group A, because of its roles in supporting salmon and baitfish species from WRIA 13 as well as other South Puget Sound WRIAs. Exotic species (e.g., brook trout) may be present in Group A sub-watershed, but are not dominant. Other resident native species may also be supported by the sub-watershed (e.g., Olympic mud-minnow), reflecting good water quality and the existence of large, often continuous blocks of high-quality physical habitat that remains in these watersheds.

Recognizing the existing functionality in Group A sub-watersheds/near-shore HU's, the most appropriate projects are often those that protect these properly functioning habitats through a combination of easement and/or landowner agreements, conservancy programs, or property purchase.

- *GROUP B SUB-WATERSHEDS*

The most important difference between Group A and B sub-watersheds is the size and connectivity of the adjacent reaches within the sub-watersheds. These factors dictate that Group B watersheds, overall, have less current *and* potential production (i.e., in terms of spawning escapement). Fragmentation of otherwise suitable habitats in these sub-watersheds has resulted from habitat disturbance or loss. These sub-watersheds have substantial areas where native or wild populations of salmonids are generally not found for a variety of reasons; however, native and/or wild stocks continue to use the sub-watersheds to a significant degree for at least a portion of their life cycle. Complete freshwater life history requirements are supported for at least one

salmonid species in Group B sub-watersheds. Connectivity among reaches in these sub-watersheds could be rehabilitated so that it may be possible to restore and/or enhance life history patterns and dispersal. Restoring ecosystem functions and connectivity within these sub-watersheds are often the most appropriate focus for salmon recovery projects. Such restoration projects in these watersheds should address causal mechanisms, such as land-forming processes, such that restoration projects are long-lived and relatively maintenance free.

- *GROUP C SUB-WATERSHEDS*

  These sub-watersheds still support salmonids, but are either naturally limited in their production potential, or, even with significant habitat improvements, could not realize a substantial increase in salmonid use that would significantly contribute to the overall salmon recovery in WRIA 13. Salmonid species diversity in these systems is generally limited. These sub-watersheds either have experienced substantial habitat degradation and are highly fragmented, or have never held a historically significant role in salmonid production in the WRIA. Habitat degradation in these sub-watersheds has occurred principally through a loss of habitat connectivity—via a variety of means. Currently, the opportunities for restoring full expression of life histories for priority salmonid stocks in the WRIA are greatly limited within these sub-watersheds. An assessment of the production potential and habitat conditions is often warranted to best identify where restoration could best serve overall production in these sub-watershed. Therefore, projects in the SRFB "assessment" category are often the most appropriate for this group of sub-watersheds, although restoration projects focused on fixing long-term source problems could also score highly. As with Group B sub-watersheds, restoration projects in Group C sub-watersheds should address causal mechanisms for habitat degradation, so that any habitat restoration projects implemented are long-lived.

SUB-WATERSHED GROUPINGS IN WRIA 13

Watersheds and geographic areas within WRIA 13 that would be incorporated into Groups A and B are discussed briefly below. All other independent basins would be classified within Group C until further data collection permits a better understanding of the conditions and production potential in these systems. Rationale for these groupings is briefly summarized below. It is important to recognize that the sub-watershed groupings indicated below reflect the strategy as of 2001/2002, and that, after adequate protection/restoration is established, the watershed groupings may (and should) shift. Such re-groupings are consistent with the annual adaptive management objective of the strategy outlined in section 2.3.

GROUP A

- NEAR-SHORE HABITATS

  Within WRIA 13, there has been an extensive loss of estuarine and near-shore habitat, habitats of particular importance for chum salmon, native cutthroat trout, and ocean-type Chinook and baitfish production. This habitat loss has been attributed principally to shoreline armoring and sediment contamination (particularly in Budd Inlet) (WCC 1999). Future demand for shoreline habitats and development pressure places the remaining near-shore and estuary habitats of WRIA 13 in highly vulnerable positions. The undeveloped near-shore habitats in WRIA 13 (e.g., Eld and Henderson Inlets, Nisqually Reach) are relatively pristine with little development. These habitats benefit the marine life history stages of all salmonid stocks in WRIA 13, regardless of their sub-watershed origin and protection of this habitat is critically important. Opportunities exist for the rehabilitation of developed shorelines within WRIA 13, particularly along the southwestern near-shore regions of Budd Inlet.

- MCLANE CREEK SUB-WATERSHED:

  This sub-basin offers relatively pristine conditions for native chum and wild coho. The McLane Creek sub-watershed drains into highly productive mud-flat habitat of Eld Inlet that is particularly productive for chum salmon. Multiple tributaries within McLane Creek offer a range of habitat types to foster high habitat complexity and species diversity. This system also supports what are thought to be the only native steelhead and chum stocks in WRIA 13.

- DESCHUTES RIVER MAINSTEM AND TRIBUTARIES:

  Several Deschutes river tributaries (sub-watersheds) offer an array of fair to excellent spawning and rearing conditions for wild coho and by virtue thereof represent perhaps the largest production potential for this species in the WRIA. Protection and improvement of habitat in these tributaries is therefore critical for the recovery of wild coho in south sound and WRIA 13. Improvement of habitats in these tributaries could feasibly influence biological processes and nutrient budgets of adjacent sub-watersheds in the Deschutes river mainstem and, indirectly, elsewhere in WRIA. The Deschutes River mainstem has high production potential for supporting coho, cutthroat trout, and steelhead, and for Chinook released upstream of Tumwater Falls.

- GREEN COVE CREEK:

  This Eld Inlet tributary principally supports spawning chum and coho, and cutthroat trout. Steelhead and chinook have also supposedly been observed

in this system, although the habitat is not particularly suitable for these species (especially chinook). The creek remains a WDFW index stream for native chum and has served as a location for coho outplants. It also supports the rare Olympic mud minnow. Non-native brook trout exotics may persist in the system. Although its numeric production potential is limited overall because of its size, the watershed is relatively intact, and its proximity to McLane creek support the need to protect this system (for chum in particular) in the event of a catastrophic habitat event in the McLane Creek system.

GROUP B

- WOODARD AND WOODLAND CREEKS:

These Henderson Inlet tributaries offer long watershed areas with fair to good riparian stability, and hydrology buffered by source wetland waters. They are both highly vulnerable to development from localized growth, and have experienced impacts to watershed hydrology from impervious surface development and from loss of some of the source wetlands. Both systems, however, continue to support high species diversity (chum, coho, steelhead, hatchery-origin chinook in Woodland) with historic native stock production, and current production of coho and chum salmon of mixed stock origins. In addition, most of the lengths of these watersheds are accessible to anadromous salmonids (WCC 1999). The low gradient of these systems particularly favors coho, chum, and native cutthroat trout. Such low gradient habitat is increasingly rare in the urbanized Puget lowlands. Production potential in these systems could be increased substantially through protection and habitat restoration actions, though total production in the systems is ultimately limited by altered hydrology.

- PERCIVAL CREEK/BLACK LAKE DITCH:

Stable hydrology and good flows in this system favor the production currently realized in this system for chinook salmon. Extensive use of the system by coho also occurs. An understanding of whether this system is at carrying capacity for either chinook or coho has not been established, and an evaluation of habitat restoration opportunities, particularly in Black Lake Ditch, has not been conducted.

Past adult spawner escapement and resulting downstream juvenile migration have been impaired by screening at the mouth of the creek associated with the Deschutes Hatchery programs. Recent changes have improved ingress/egress access, increasing productivity potential.

GROUP C

All other sub-watersheds in WRIA 13 that have current or historic anadromous salmonid production shall be considered part of Group C for Tier 1 prioritization in salmon recovery.

5.1.3 ACTION RECOMMENDATIONS FROM PREVIOUS STUDIES

A number of studies have been undertaken in WRIA 13 to assess habitat conditions. A list of some of these recent studies is listed in Section 4.2. Activities that address the source (i.e., causation) of a limiting habitat factor, or are identified as a key habitat concern in previous studies are priorities in this Strategy.

5.1.4 BIOLOGICAL FUNCTIONALITY IN WRIA 13

It is recognized that the functions that create and maintain habitat must be addressed in order to achieve salmon recovery. When prioritizing projects, whether an action is closely associated with the biological functions below will be assessed.

The functions are broadly categorized and evaluated under the following areas:

- Hydrology
    - project protects/preserves perennial stream or spring flows
    - project restores perennial stream or spring flows (e.g., via water right trade)
    - project functionally assesses spring or stream flows/velocity profiles (e.g., IFIM)
    - project protects/restores dendritic channel network/hydrology in nearshore habitat
    - project protects/restores channel morphology in stream channel
- Water Quality
    - project protects/preserves estuarine mixing to provide for range of salinities
    - project restores estuarine mixing to provide for range of salinities

- project would protect against water temperature increase
- project would restore habitat to yield lower temperatures over time
- project would restore natural nutrient levels
- project would assess water quality

- Habitat Quality
  - project protects or promotes LWD retention
  - project restores LWD densities in area where natural retention should exist
  - project assesses LWD loading on basis of geomorphic constraints of stream
  - project protects against spawning gravel scouring and/or embedding
  - project restores spawning gravels to area where natural retention should exist
  - project assesses spawning gravels
  - project protects/preserves erosion prone shoreline habitat (without armoring)
  - project restores or stabilizes erosion-prone shoreline habitat (by natural means)
  - project restores/protects near shore habitat used by prey species of salmonids
  - project restores/protects near-shore substrate composition

- Habitat Access
  - project protects juvenile and adult habitat access under all flows
  - project restores juvenile access under high/mean/low flows
  - project restores adult access under high/mean/low flows
  - project assesses juvenile and adult habitat access

- Floodplain Connectivity
    - project protects floodplain connectivity (e.g., acquisition of property in a CMZ)
    - project restores floodplain connectivity (e.g., dike breaching)
    - project assesses floodplain connectivity
    - project protects riparian corridor
    - project restores riparian corridor function
    - project assesses riparian corridor function

5.1.5 COMMUNITY SUPPORT

The role of community interest and involvement in salmon recovery is a crucial one. Community interests need to be considered in concert with the technical aspects of salmon recovery in order to achieve a successful long-term outcome. Citizen review of projects aimed at salmon recovery is a vital step to encourage present and future community-wide interest and participation. These community elements that should be recognized as important to salmon recovery in WRIA 13 include:

- Tribal concerns
- Existing community activities
- Watershed and nearshore stewardship group development
- Potential for future broad spectrum community involvement
- Building citizen support in high priority areas
- Building citizen support in implementing key concerns in sub-watersheds
- Economic concerns
- Project sequencing
- Links to other habitat projects
- Equity between watershed basins and nearshore areas
- Land Use regulations

5.1.6 SPECIES PRIORITIES

In recognition of the importance of protecting and increasing the abundance of remaining native and naturally reproducing (wild) stocks, the WRIA 13 salmon recovery strategy emphasizes preserving, restoring and assessing habitat in the sub-watersheds most important to priority species. The conceptual strategy for salmon recovery in WRIA 13 reflects the general guidance of the SRFB, but deviates slightly because of the unique nature of the watersheds within the WRIA 13 boundary, and because there are no ESU/DPS stocks that are expressly dependent on WRIA 13 waters. The overall strategy for WRIA 13 therefore focuses on recovering both native *and* naturally reproducing (wild) stocks with the greatest production potential—based on existing and potential habitat conditions in the WRIA. In keeping with this strategy, chum, coho, steelhead, and cutthroat trout are, respectively, the salmonid species of greatest importance to salmon recovery in the WRIA. Chinook salmon are accorded a lower importance at this time due to the hatchery management emphasis, but this may change in the future as the role of Deschutes Chinook to Puget Sound Chinook recovery is further clarified, or as the natural production potential of the Deschutes is further evaluated.

This species focus for recovery will be reflected in how specific projects will be scored. In addition, activities in the WRIA which conserve the biological diversity that is important to salmon recovery (activities that benefit multiple species) are also priorities.

Rationale for the focus on these species can be briefly summarized as follows:

- Stock status of chum in WRIA 13 streams ranges from healthy, to unknown, to unidentified. Both native and wild chum salmon use several of the small drainages in the watershed; thus, the protection and enrichment of chum stocks is considered a high priority. South Puget Sound waters of WRIA 13 provide a stronghold for native chum in Puget Sound.

- The streams in WRIA 13 provide suitable habitat for coho, and productivity could be improved by habitat restoration, and by increasing adult escapements. Significant outplanting of hatchery coho juveniles (primarily unfed fry) has occurred in past years throughout the watershed, but this practice has been substantially reduced in recent years. Although south Puget Sound coho are managed primarily at a hatchery harvest rate, secondary protection is provided at the mouths of WRIA 13 stream to maximize escapement and resulting wild production. Although the coho stock in the Deschutes River was artificially introduced, continuing production relies on wild production; all coho entering the Deschutes River are passed upstream to spawn naturally. Significant declines in coho escapements and juvenile production have been observed in recent years in the Deschutes

River; it is unclear whether the same trends are occurring in other WRIA 13 streams. As a result, coho restoration is a high priority in WRIA 13.

- The stock status of steelhead trout in WRIA 13 waters ranges from healthy to unknown. Although the steelhead stock in the Deschutes River was artificially introduced, continuing production relies on wild production; all steelhead entering the Deschutes River are passed upstream to spawn naturally. Eld Inlet steelhead production is of wild origin. Steelhead restoration is a high priority in WRIA 13.

- Cutthroat trout in WRIA 13's anadromous waters are essentially native, although the stock status is unknown. The overall production potential is high for this species in WRIA 13, and is considered as a high priority.

- Chinook in WRIA 13 are introduced and are primarily of hatchery origin. The hatchery production from the Deschutes River affords continued chinook harvest opportunity at a time when many fisheries/areas are severely restricted for wild chinook recovery. The role that the Deschutes hatchery chinook may play in the overall recovery of the Puget Sound ESU of this species has not been determined and cannot be disregarded at this time. Adult chinook spawners are regularly observed in several of the other streams in WRIA 13, but it is the opinion of WDFW and the Squaxin Tribe that these are most likely hatchery-origin strays, and that production would likely not persist over time if hatchery production was terminated. Projects that benefit chinook in watersheds where they occur would benefit the other priority species for salmon recovery in WRIA 13. Because of the hatchery-origin status of chinook in WRIA 13, they are considered to be important, but of lower priority than the other anadromous salmonid species.

5.2 THE STRATEGY AND THE PROJECT RANKING PROCESS 2001-2002

While an overriding conceptual framework is paramount to any salmon recovery strategy, some mechanism must also exist by which specific projects can be evaluated for their adequacy in meeting the salmon recovery objectives of the WRIA outlined *in* the strategy. Committees have been meeting to develop a ranking process that enables projects to be ranked against specific criteria. These criteria have both technical and community interest/involvement emphasis. Two committees have been active in WRIA 13 in this process, a Technical Committee and a Citizen Salmon Recovery Committee. Committee participation and community representation has increased over the past two funding cycles. The Citizen Committee is composed of representatives from local jurisdictions, agencies, community groups, watershed organizations, and individual interested citizens. The Technical Committee is made up of individuals with expertise in fisheries science, and citizens with expertise in local issues.

The committees meet regularly to discuss and work on salmon recovery issues, and particularly issues concerned with an overall recovery strategy and implementation of that strategy.

The process for screening and ranking projects in WRIA 13 is as follows:

1. Citizen and Technical committees receive copies of all project applications after application closing date.

2. Both committees hear project presentations from project sponsors.

3. Both committees view video of project sites.

4. Technical Committee performs their project scoring. The Technical Committee uses a formula that is based on benefit to salmonids, which is directly linked to the WRIA 13 Recovery Strategy. The Committee will engage in round-table discussions before each member scores projects individually. Scores from each of the committee members will be averaged to determine final scores and ranking at this point.

5. Technical Committee brings their scoring and ranking of projects to Citizen Committee.

6. Technical Committee and Citizen Committee discuss the scores and ranking of projects done by the Technical Committee. The two committees in concert will endorse or revise ranking to incorporate the other perspectives and social/political considerations in the watershed. The committees will document the rationale for any changes to the rankings of the projects performed by the Technical Committee.

7. The list of ranked projects will be submitted to the SRFB.

For detailed information about the scoring and ranking procedure for WRIA 13 in 2001-2002, please refer to the document “WRIA 13 Scoring and Ranking Procedure 2001-2002”.

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